

Appl. No. 10/009,415
Response to Office Action of July 13, 2005
Page 2 of 8

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. Cancelled
2. (Currently amended) A frequency separating filter having a low-pass branch for low frequency signals, particularly of analog communication systems, and a high-pass branch for high frequency signals of digital communication systems, with multiple inductive components with magnetic cores, wherein the high-pass branch comprises a pass range above about 20 kHz, at least one component with a magnetic core made of an amorphous or nanocrystalline alloy, and ~~The frequency separating filter according to claim 1,~~ wherein the alloy has the composition $\text{Co}_a(\text{Fe}_{1-c}\text{Mn}_c)_b\text{Ni}_d\text{M}_e\text{Si}_x\text{B}_y\text{C}_z$, with M indicating one or more elements from the group Nb, Mo, Ta, Cr, W, Ge, and P and $a+b+d+e+x+y+z = 100$, with

Co: $a = 40 - 82 \text{ at\%}$,

Fe+Mn: $b = 3 - 10 \text{ at\%}$,

Mn/Fe: $c = 0 - 1$,

Ni: $d = 0 - 30 \text{ at\%}$,

M: $e = 0 - 5 \text{ at\%}$,

Si: $x = 0 - 17 \text{ at\%}$,

B: $y = 8 - 26 \text{ at\%}$,

C: $z = 0 - 3 \text{ at\%}$,

$15 < e+x+y+z < 30$.

3. (Previously presented) The frequency separating filter according to claim 2, wherein the following relationships apply:

Co: $a = 50 - 82 \text{ at\%}$,

Appl. No. 10/009,415
Response to Office Action of July 13, 2005
Page 3 of 8

Fe+Mn: $b = 3 - 10 \text{ at\%}$,

Mn/Fe: $c = 0 - 0.5$,

Ni: $d = 0 - 20 \text{ at\%}$,

M: $e = 0 - 3 \text{ at\%}$,

Si: $x = 1 - 17 \text{ at\%}$,

B: $y = 8 - 20 \text{ at\%}$,

C: $z = 0 - 3 \text{ at\%}$,

with $18 < e+x+y+z < 25$.

4. (Currently amended) A frequency separating filter having a low-pass branch for low frequency signals, particularly of analog communication systems, and a high-pass branch for high frequency signals of digital communication systems, with multiple inductive components with magnetic cores, wherein the high-pass branch comprises a pass range above about 20 kHz, at least one component with a magnetic core made of an amorphous or nanocrystalline alloy, and ~~The frequency separating filter according to claim 1,~~ wherein the alloy has the composition $\text{Fe}_a\text{Cu}_c\text{M}_f\text{Si}_d\text{B}_e$, with M indicating an element from the group Nb, W, Ta, Zr, Hf, Ti, Mo, or a combination of these and $a + c + f + d + e = 100\%$, with

Fe: $a = 100\% - c - f - d - e$,

Cu: $c = 0.5 - 2 \text{ at\%}$,

M: $f = 1 - 5 \text{ at\%}$,

Si: $d = 6.5 - 18 \text{ at\%}$,

B: $e = 5 - 14 \text{ at\%}$,

with $d + e > 18 \text{ at\%}$.

5. (Previously presented) The frequency separating filter according to claim 4, wherein the following relationships apply:

Cu: $c = 0.8 - 1.2 \text{ at\%}$,

M: $f = 2 - 3 \text{ at\%}$,

Appl. No. 10/009,415
Response to Office Action of July 13, 2005
Page 4 of 8

Si: $d = 14 - 17 \text{ at\%}$,
B: $e = 5 - 14 \text{ at\%}$,
with $d + e = 22 - 24 \text{ at\%}$.

6. (Currently amended) A frequency separating filter having a low-pass branch for low frequency signals, particularly of analog communication systems, and a high-pass branch for high frequency signals of digital communication systems, with multiple inductive components with magnetic cores, wherein the high-pass branch comprises a pass range above about 20 kHz, at least one component with a magnetic core made of an amorphous or nanocrystalline alloy, and ~~The frequency separating filter according to claim 1,~~ wherein the alloy has the composition $\text{Fe}_x\text{Zr}_y\text{Nb}_z\text{B}_v\text{Cu}_w$, with $x + y + z + v + w = 100 \text{ at\%}$, with

Fe: $x = 100 \text{ at\%} - y - z - v - w$,
Zr: $y = 2 - 5 \text{ at\%}$,
Nb: $z = 2 - 5 \text{ at\%}$,
B: $v = 5 - 9 \text{ at\%}$,
Cu: $w = 0.5 - 1.5 \text{ at\%}$,
with $y + z > 5 \text{ at\%}$ and $y + z + v > 11 \text{ at\%}$.

7. (Previously presented) The frequency separating filter according to claim 6, wherein the following relationships apply:

Fe: $x = 83 - 86 \text{ at\%}$,
Zr: $y = 3 - 4 \text{ at\%}$,
Nb: $z = 3 - 4 \text{ at\%}$,
B: $v = 5 - 9 \text{ at\%}$,
Cu: $w = 1 \text{ at\%}$,
with $y + z = 6 - 7 \text{ at\%}$,
and $y + z + v > 12 - 16 \text{ at\%}$.

Appl. No. 10/009,415
Response to Office Action of July 13, 2005
Page 5 of 8

8. (Previously presented) A frequency separating filter having a low-pass branch for low frequency signals, particularly of analog communication systems, and a high-pass branch for high frequency signals of digital communication systems, with multiple inductive components with magnetic cores, wherein the high-pass branch comprises a pass range above about 20 kHz, at least one component with a magnetic core made of an amorphous or nanocrystalline alloy, and ~~The frequency separating filter according to claim 1,~~ wherein the alloy has the composition $\text{Fe}_x\text{M}_y\text{B}_z\text{Cu}_w$, with M indicating an element from the group Zr, Hf, Nb and $x + y + z + w = 100$ at%, with

Fe: $x = 100 \text{ at\%} - y - z - w$,

M: $y = 6 - 8 \text{ at\%}$,

B: $z = 3 - 9 \text{ at\%}$,

Cu: $w = 0 - 1.5 \text{ at\%}$.

9. (Previously presented) The frequency separating filter according to claim 8, wherein the following relationships apply:

Fe: $x = 83 - 91 \text{ at\%}$,

M: $y = 7 \text{ at\%}$,

B: $z = 3 - 9 \text{ at\%}$,

Cu: $w = 0 - 1.5 \text{ at\%}$.

10. (Currently amended) A frequency separating filter having a low-pass branch for low frequency signals, particularly of analog communication systems, and a high-pass branch for high frequency signals of digital communication systems, with multiple inductive components with magnetic cores, wherein the high-pass branch comprises a pass range above about 20 kHz, at least one component with a magnetic core made of an amorphous or nanocrystalline alloy, and ~~The frequency separating filter according to claim 1,~~ wherein the alloy has the composition $(\text{Fe}_{0.98}\text{Co}_{0.02})_{90-x}\text{Zr}_7\text{B}_{2+x}\text{Cu}_1$, with $x = 0 - 3$, with the residual alloy component Co able to be replaced by Ni with appropriate equalization.

Appl. No. 10/009,415
Response to Office Action of July 13, 2005
Page 6 of 8

11. (Previously presented) The frequency separating filter according to claim 10,
wherein $x = 0$.

12. (Previously presented) The frequency separating filter according to claim 4,
wherein the alloy also has an element which is Co or Ni.

13. (Previously presented) The frequency separating filter according to claim 12,
wherein the alloy also has Co_b with
Co: $b = 0 - 15 \text{ at\%}$.

14. (Previously presented) The frequency separating filter according to claim 5,
wherein the alloy also has Co_b with
Co: $b = 0 - 0.5 \text{ at\%}$.